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# Cotton Fiber and Processing Test Results



CROP of

1976



Agricultural Marketing Service  
U.S. DEPARTMENT OF AGRICULTURE  
Memphis, Tenn. 38122 January 28, 1977

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This is the last report for the 1976 crop. These reports were published bi-weekly during the harvesting season and will be summarized in a comprehensive report at the end of the crop year. A detailed description of the tests shown in this report may be found in the summary report for the previous season.<sup>1/</sup> These reports are available on request from the Standardization Section, Cotton Division, Agricultural Marketing Service, U. S. Department of Agriculture, 4841 Summer Avenue, Memphis, TN 38122.

<sup>1/</sup> Summary of Cotton Fiber and Processing Test Results, Crop of 1975, USDA, AMS, Cotton Division, May 1976.

## COTTON FIBER AND PROCESSING TEST RESULTS, CROP OF 1976

### Discussion of Test Results

Short staple cottons tested from the Southwestern Area through January 21 show fibers to be coarser and slightly weaker than last season, according to the Cotton Division, Agricultural Marketing Service, USDA. Shirley Analyzer nonlint content is lower, but picker and card waste is higher. Yarns spun from these samples are weaker, but show fewer imperfections than last season. Spinning potential yarn number is lower.

Average test results for all medium staple samples tested to date show slightly shorter and stronger fibers than a year ago. Shirley Analyzer nonlint content is lower, but picker and card waste is higher. Yarns spun from these samples show about the same quality characteristics as a year earlier.

Southeastern Area medium staple samples are slightly longer and more uniform than a year ago. Fibers are coarser and stronger. Shirley Analyzer nonlint content is lower. Yarn skein strength is higher. Yarn imperfections are fewer and the spinning potential yarn number is higher.

South Central medium staple samples are shorter, less uniform and stronger at zero gage fiber tests than a year ago. Shirley Analyzer nonlint content is lower, but picker and card waste is higher. Yarn strength and appearance grades are about the same as a year ago. Yarn imperfections are fewer. Spinning potential yarn number is lower.

Southwestern medium staple samples tested are slightly longer, more uniform, coarser and weaker at zero gage strength tests. Picker and card waste is higher. Yarns spun from these samples have higher appearance grades and show fewer imperfections than a year ago.

Medium staple samples from the West are slightly shorter and weaker than a year ago. Picker and card waste is higher. Yarns spun from these samples are weaker and show lower appearance grades than last season. Yarn imperfections are fewer. Spinning potential yarn number is lower.

Long staple samples tested through January 21 this season are longer, more uniform, and coarser than a year ago. Shirley Analyzer nonlint content and manufacturing waste are lower this season. Yarns spun from these samples are stronger and have fewer imperfections. The spinning potential yarn number is higher than a year ago.

No additional long staple samples were received during this test period.

American Pima extra long staple samples tested to date are longer and have about the same strength and mike properties as a year earlier. Both picker and card waste and comber waste are lower than a year ago. Yarns spun from these samples have about the same quality characteristics as a year earlier.

Table 1.--Cotton: Averages of fiber and processing tests from selected gin points in the United States through January 21, 1977

Staple group Area, and Crop year	Lots tested	Fiber test results							Processing test results								
		Fibrograph		Mike fine- ness	Fiber strength		S A nonlint	P & C waste	Yarn quality			Spin. Potent.					
		2.5% span	50/2.5 unif.		Pct.	Rdg.			Zero gage	1/8" gage	G/tex		Mpsi	Pct.	Lbs.	Index	No.
No.														Yarn No.			
Short Staple: Southwest	60	.95	45	3.6	85	22	4.0	6.7	98	109	23	43					
	59	.95	45	4.3	84	21	3.4	7.0	88	110	14	40					
Medium Staple: Southeast	44	1.07	44	4.2	83	22	3.9	6.3	97	97	26	53					
	50	1.08	45	4.6	85	23	3.3	6.3	106	98	20	56					
South Central	114	1.10	45	4.3	85	23	3.1	5.7	105	101	21	59					
	124	1.08	44	4.2	88	23	2.7	6.3	107	99	17	56					
Southwest	36	1.05	43	3.7	83	22	3.7	6.2	103	88	32	56					
	38	1.06	45	4.0	82	22	3.5	6.8	103	92	25	55					
West	69	1.12	45	4.1	92	26	2.3	5.5	123	93	23	69					
	73	1.11	45	4.2	89	25	2.2	5.8	118	89	19	66					
U.S. Average	263	1.09	45	4.2	86	23	3.1	5.8	108	97	23	60					
	285	1.08	45	4.2	87	24	2.8	6.2	109	96	19	58					
Significant dif- ference 2/		0.02	2	0.2	2	1	0.5	0.5	4(22s)	5	2	3					

1/ Based on a limited number of samples of modal quality

2/ Minimum differences considered to be significant for comparisons in this table.

Table 1.--Cotton: Averages of fiber and processing tests from selected gin points in the United States through January 21, 1977 1/ (Continued)

Staple group, Area, and Crop year	Lots	Fiber Test Results						Processing Test Results									
		Length		Mike	Strength		SA Non-lint	P&C Waste	Comber Waste	Yarn Quality					SPY		
		Span	Unif		Zero 1/8" gage	G/tx				Pct.	Lbs. carded	Indx carded	Appearance	Imprfctns card			
																Pct.	Lbs. combed
No.	In.	Pct.	Rdg.	Mpsi	G/tx	Pct.	Pct.	Lbs.	Lbs. carded & Combed Yarn	Indx	No.	No.	No.				
Long Staple:																	
Southeast																	
1975	18	1.09	43	4.2	85	22	3.7	9.6	18.8	91	115	110	119	19	10	54	
1976	12	1.14	45	4.4	86	25	3.1	6.7	15.8	115	136	104	116	20	8	66	
South Central																	
1975	6	1.11	43	4.0	88	23	3.8	9.2	18.1	104	125	110	120	19	9	62	
1976	3	1.12	42	3.7	91	26	3.4	6.8	20.3	109	137	97	103	13	10	57	
West																	
1975	17	1.16	45	3.3	93	26	3.1	8.7	16.1	138	158	82	96	39	22	89	
1976	5	1.19	46	3.4	87	27	4.0	9.1	13.4	144	166	84	94	35	16	105	
U.S. Average																	
1975	41	1.12	44	3.8	89	24	3.5	9.1	17.6	113	135	99	109	28	15	69	
1976	20	1.15	45	4.0	87	26	3.3	7.3	15.9	121	143	98	108	23	11	74	
Extra Long Staple:																	
West																	
1975	13	1.47	31	3.6	104	33	3.2	7.4	18.4	67	108				2		
1976	18	1.49	31	3.6	102	34	2.7	6.8	16.0	65	110				2		
Significant Difference 2/		0.02	2	0.2	2	1	0.5	0.5	0.5	4(22s)	5	5	5	2	2	3	

Array

American Pima

50's Combed Yarn

1/ Based on a limited number of samples of modal quality  
2/ Minimum differences considered to be significant for comparisons in this table.

Table 2 --Cotton, American upland short staple: Quality characteristics by production areas, crop of 1976

Production Area, Classification & Sample Number				Fiber Test Results										Processing Test Results - Carded Yarns												
No	Grade	Name & Code	Stple 32s	Digital Fibrograph		Mike	Fiber Strength		Elon-gat'n 1/8"	S.A. Non-lint	Color Raw Stock		P & C Waste	Strength		Elongation		Appearance Index		Imprfct'ns		Spin. Potent-ial				
				2.5% span	Unif		Zero Gage	1/8" Gage			Mpsi	G/tex		Pct	Pct	Gra	Yel	Pct	Pct	8s or 74 tx	22sor 27 tx		8s or 74 tx	22sor 27 tx	8s or 74 tx	22sor 27 tx
SOUTHWEST AREA																										
NORTHWEST TEXAS																										
LAMESA																										
3	SLM	LT SP	42 <sup>1</sup> / <sub>2</sub>	31	0.97	44	3.4	84	20	8.2	3.9	2	4	7.1	284	92	8.1	6.9	120	100	27	17	47			
70 PERCENT																										
LOCKNEY																										
3	SLM	SP	43 <sup>2</sup> / <sub>2</sub>	29	0.97	44	3.1	76	21	7.1	3.9	4	6	7.4	275	87	7.5	6.2	110	100	59	38	44			
90 PERCENT																										
LGUP																										
3	SLM	LT SP	42 <sup>1</sup> / <sub>2</sub>	30	0.88	47	4.8	87	19	6.8	2.7	2	3	7.1	255	77	6.7	5.0	120	110	26	13	30			
90 PERCENT																										
OLNEY																										
2	MID	LT SP	32	31	0.97	45	5.4	86	21	7.5	2.6	2	3	6.1	282	91	7.2	6.0	130	120	14	10	44			
80 PERCENT																										
SILVERTON																										
3	SLM	LT SP	42 <sup>1</sup> / <sub>2</sub>	30	0.91	45	4.0	83	20	7.5	2.7	3	5	5.7	276	88	7.3	6.2	120	110	37	22	38			
95 PERCENT																										

<sup>1</sup>/ Reduced from 32 because of bark  
<sup>2</sup>/ Reduced from 33 because of bark

Table 3 --Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1976

Production Area, Classification & Sample Number				Fiber Test Results										Processing Test Results - Carded Yarns											
No	Grade	Stple	32s	Digital Fibrograph		Mike	Fiber Strength		Elon-gat'n 1/8"	S.A. Non-Lint		Color Raw Stock		P & C Waste	Strength		Elongation		Appearance Index		Imperfect's		Spin. Potential		
				2.5% span	Unif.		Mpsi	G/tex		Pct	Pct	Gra	Yel		Lbs	Lbs	Pct	Pct	22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx		22s or 27 tx	50s or 12 tx
SOUTHEAST AREA																									
GEORGIA																									
SPECIAL CIRCLE				51	35	1.11	45	4.5	85	22	6.8	5.1	2	3	7.9	107	34	6.0	4.5	100	80	27	18	60	
NORTH CAROLINA																									
SHELBY				3	SLM LT SP	42	34	1.03	46	4.7	87	22	6.9	3.4	3	4	6.7	93	30	5.6	110	90	12	10	52
SOUTH CENTRAL AREA																									
MISSISSIPPI																									
IRIBETT				3	SLM	41	34	1.09	43	4.7	91	22	5.3	2.8	2	2	6.1	98	31	5.0	100	80	11	10	54
TENNESSEE																									
CYERSBURG				3	SLM LT SP	42	34	1.05	44	4.0	86	22	7.6	2.9	2	3	5.2	104	35	6.2	90	70	24	18	62
SOUTHWEST AREA																									
NORTHWEST TEXAS				3	LM SP	53	2/35	1.16	40	3.3	85	23	6.9	5.3	4	6	8.9	106	35	6.0	70	60	43	31	55
WEST AREA																									
ARIZONA				3	MIU	31	34	1.10	42	3.9	83	21	5.9	2.1	0	2	4.2	93	29	5.2	80	60	16	15	50
RCLL				3	MIU	31	35	1.11	44	4.5	85	23	7.6	2.4	0	2	6.3	95	30	6.0	80	60	25	19	50
CALIFORNIA																									
WESTMORLAND				3	MIU	31	34	1.10	44	4.6	83	24	7.1	1.9	0	2	4.5	99	31	5.5	90	80	14	11	53
* 100% selected for tests, less than 100% in area																									
1/ Reduced from 41 because of bark																									
2/ Reduced from 43 because of bark																									

\* 100% selected for tests, less than 100% in area

1/ Reduced from 41 because of bark

2/ Reduced from 43 because of bark

Table 4 --Cotton, American Pima extra long staple: Quality characteristics by production areas, crop of 1976

Production Area, Classification & Sample Number				Fiber Test Results										Processing Test Results - Combed Yarns									
No	Grade	Name & Code	Style	Array Length		Mike	Fiber Strength		Elon- gat'n 1/8"	S.A. Non- Lint	Color Raw Stock		P & C Waste	Comber Waste	Strength		Elongation		Appearance Index		Imprfct'ns		
				UQL	CV		Zero Gage	1/8" Gage			Gra	Yel			50s or 12 tx	80s or 7 tx	50s or 12 tx	80s or 7 tx	50s or 12 tx	80s or 7 tx	No	No	
32s				In	Pct	Rdg	Mpsi	G/tex	Pct	Pct	No	No	Pct	Pct	Lbs	Lbs	Pct	Pct	No	No	No	No	
WEST AREA																							
ARIZONA																							
CASA GRANDE																							
3	4	46		1.52	30	4.1	108		7.4	3.5	4	5	7.5	17.1	66	35	5.3	4.7	110	100	1	1	
PIMA S-5																							
100 PERCENT																							
WENDEN																							
3	4	44		1.48	33	3.3	104		7.9	3.8	4	5	7.2	17.2	65	34	5.5	4.7	100	110	1	2	
PIMA S-5																							
100 PERCENT																							